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EXAMINER

SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
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2673

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12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/733,673

Applicant(s)

SAKAGUCHI ET AL.

Examiner

Leonid Shapiro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (US Patent No. 6,211,849 B1) in view of Taguchi et al. (US Patent No. 6, 593, 918 B2).

As to claim 1, Sasaki et al. teaches a liquid crystal display device with: a crystal cell forms an image display area on substrate (See Fig.2, item 22, in description See from Col. 2, Line 50 to Col.4, Line 3); a driver for applying a voltage to liquid crystal cell based on an input video signal, wherein driver includes a plurality of driver ICs that mounted on substrate (See Figs. 2-3, items 1-3,10,23 in description See Col. 4, Lines) and a plurality of signal lines, each of the signal lines passing through each of the driver ICs in series, wherein driver ICs are cascade-connected in series using signal lines (See Fig. 3, items 1-3,10, in description See Col. 4, Lines 34-43).

Sasaki et al. does not show each driver IC includes a controller for generating a mask signal to mask video data output from the driver IC.

Taguchi et al. teaches to generate an RGB masking signal to mask video data output from the driver IC (See Figs. 14, 15, items 12, 46, in description See Col. 7, Lines 56-67 and Col. 8, Lines 6-18).

It would have been obvious to the one ordinary skill in the art in the time of invention to implement Sasaki et al. controller using Taguchi et al. approach to include a controller for generating a mask signal to mask video data output from each driver IC in order to suppress a disturbance of image on the panel (See Col. 3, Lines 20-21 in Taguchi et al. reference).

As to claim 4, Sasaki et al. teaches a liquid crystal display device with: a crystal cell forms an image display area on substrate (See Fig. 2, item 22, in description See from Col. 2, Line 50 to Col. 4, Line 3); a driver for distributing an input video signal to a plurality of driver ICs chain-connected in series using a plurality of signal lines (See Figs. 2-3, items 1-3, 10, 23 in description See Col. 4, Lines), each of the signal lines passing through each of the driver ICs in series, and for applying a voltage to LCD cell by employing driver ICs, wherein driver distributes video signal to plurality of driver ICs (See Fig. 3, items 1-3, 10, in description See Col. 4, Lines 34-43).

Sasaki et al. does not show each driver IC includes a controller for providing a masking signal to mask video output by the driver IC.

Taguchi et al. teaches to generate an RGB masking signal to mask video data output from the driver IC (See Figs. 14, 15, items 12, 46, in description See Col. 7, Lines 56-67 and Col. 8, Lines 6-18).

It would have been obvious to the one ordinary skill in the art in the time of invention to implement Sasaki et al. controller using Taguchi et al. approach to include a controller for generating a mask signal to mask video data output from each driver IC in order to suppress a disturbance of image on the panel (See Col. 3, Lines 20-21 in Taguchi et al. reference).

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. and Taguchi et al. as aforementioned in claim 1 in view of Zavracky et al. (US Patent No. 5,751,261).

Sasaki et al. and Taguchi et al. do not teach about a power feed line via metal layer of each driver IC.

Zavracky et al. shows how to implement an aluminum interconnect (See Fig. 8, items 100, 1047, 1400, in description See Col. 15, Lines 47-51). An aluminum interconnect is a metal layer could be used for a power feed line.

It would have been obvious to the one ordinary skill in the art in the time of invention to implement a power feed line as an aluminum interconnect (or via metal layer) as shown by Zavracky in Sasaki et al. and Taguchi et al. apparatus in order to reduce size of the LCD display device.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. and Taguchi et al. as aforementioned in claim 4 in view of Shimizu (US Patent No. 5,801,674).

As to claim 5, Sasaki et al. and Taguchi et al. do not teach downstream driver applies a voltage to LC cell in accordance with input video signal after receiving masking signal from upstream driver IC.

Shimizu teaches about downstream driver applies a voltage to LC cell in accordance with input video signal after receiving masking signal from upstream driver IC (See Fig. 1, items 3-6, ENABLE1-ENABLE6, in description See Col. 3, Lines 67-68 and Col. 4, Lines 1-18).

It would have been obvious to the one ordinary skill in the art in the time of invention to use approach as shown by Shimizu in the Sasaki et al. and Taguchi et al. apparatus to apply in

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downstream driver a voltage to LC cell in accordance with input video signal after receiving masking signal from upstream driver IC in order to suppress a disturbance of image on the panel (See Col. 3, Lines 20-21 in Taguchi et al. reference).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. and Taguchi et al. as aforementioned in claim 1 in view of Babcock et al. (US Patent No. 5,623,519).

Sasaki et al. and Taguchi et al. do not teach about receiving video signal consisting of serial data, and wherein video signal is synchronized based on a synchronization pattern included in the serial data.

Babcock et al. shows how to synchronize serial stream based on a synchronization pattern included in the serial data (See Fig. 1, items 410, 430, in description See Col.1, Lines 48-67 and Col.7, Lines 42-54). It would have been obvious to the one ordinary skill in the art in the time of invention to implement Babcock et al. approach in Sasaki et al. and Taguchi et al. apparatus in order to reduce size and increase reliability of the LCD display device.

5. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. in view of Zavracky et al. and further in view of Babcock et al. (US Patent No. 5,623,519) and further in view Taguchi et al.

As to claim 6, Sasaki et al. teaches a liquid crystal display device comprising: a liquid crystal cell forms an image display area on substrate (See Fig.2, item 22, in description See from Col. 2, Line 50 to Col.4, Line 3); a driver for distributing an input video signal to a plurality of driver ICs that are cascade-connected (See Figs. 2-3, items 1-3,10,23 in description See Col. 4,

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Lines), and for applying a voltage to LC cell by employing driver ICs (see Fig. 3, items 1-3,10, in description See Col. 4, Lines 34-43).

Sasaki et al. does not teach about the plurality of driver ICs are cascade-connected in series by a video transmission line provided on substrate.

Zavracky et al. shows to how to implement plurality of the drivers with interconnections on silicon substrate (See Fig. 1, items 122a and 122b, in description See Col. 3, Lines 1-10). It would have been obvious to the one ordinary skill in the art in the time of invention to implement Sasaki et al. controller using Zavracky et al. approach in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Sasaki et al. and Zavracky et al. do not teach about plurality of driver ICs are cascade-connected in series by a video transmission line provided on a substrate, video transmission line passing through each of the driver IC in series and are controlled by serial data that are transmitted along video transmission line.

Babcock et al. shows how to synchronize serial stream and control drivers based on a synchronization pattern included in the serial data (See Fig. 1, items 410, 430, in description See Col.1, Lines 48-67 and Col.7, Lines 42-54). It would have been obvious to the one ordinary skill in the art in the time of invention to implement Babcock et al. approach in Sasaki et al. and Zavracky et al. apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Sasaki et al., Zavracky et al. and Babcock et al. do not show each driver IC includes a controller for generating a mask signal to mask the serial data output from the driver IC.

Taguchi et al. teaches to generate an RGB masking signal to mask video data output from the driver IC (See Figs. 14, 15, items 12, 46, in description See Col. 7, Lines 56-67 and Col. 8, Lines 6-18).

It would have been obvious to the one ordinary skill in the art in the time of invention to implement Sasaki et al., Zavracky et al. and Babcock et al. controller using Taguchi et al. approach to include a controller for generating a mask signal to mask video data output from each driver IC in order to suppress a disturbance of image on the panel (See Col. 3, Lines 20-21 in Taguchi et al. reference).

As to claim 7, Sasaki et al. does not teach about a second signal line for which the polarity of first signal line has been inverted. As notoriously well known in the art a line with polarity of first signal line has been inverted could be easily implemented. It would have been obvious to the one ordinary skill in the art in the time of invention to add a second signal line for which the polarity of first signal line has been inverted to Sasaki et al., Zavracky et al., Babcock et al. and Taguchi et al. apparatus in order to reduce size and increase reliability of the LCD display device.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al., Zavracky et al., Babcock et al. and Taguchi et al. as aforementioned in claim 6 in view of Shin et al. (US Patent No. 5,974,464).



Sasaki et al., Zavracky et al., Babcock et al. and Taguchi et al. do not show driver with a clock line and power makes a cascade-connection to plurality of driver ICs.

Shin et al. shows a clock line and power makes a cascade-connection to plurality ICs (See Fig. 1, in description See Col. 4, Lines 55-67). It would have been obvious to the one ordinary skill in the art in the time of invention to implement cascade connections as shown by Shin et al. in Sasaki et al., Zavracky et al., Babcock et al. and Taguchi et al. apparatus in order to reduce size and increase reliability of the LCD display device.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al., Zavracky et al., Babcock et al. and Taguchi et al. as aforementioned in claim 6 in view of Komarek et al. (US Patent No. 5,825,777).

Sasaki et al., Zavracky et al., Babcock et al. and Taguchi et al. do not show a dummy circuit for substantially matching a video phase and a clock phase.

Komarek et al. teaches a dummy circuit matching operational characteristics modulating circuits (See Col. 10, Lines 7-18). It would have been obvious to the one ordinary skill in the art in the time of invention to implement dummy circuit as shown by Komarek et al. in Sasaki et al., Zavracky et al., Babcock et al. and Taguchi et al. apparatus in order to reduce size and increase reliability of the LCD display device.

8. Claims 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Sasaki et al. in further in view of Babcock et al. and further in view of Taguchi et al.

As to claim 10, Shimizu teaches about liquid crystal control comprising: receiver for receiving a video signal from a host to display an image (See Fig. 2, items 11, 12, 14, in description See Col.4, Lines 23-26); a sequencer (See Fig. 2, items 11, 12, 13, in description See Col.4, Lines 23-26); output control means for converting video signal received from receiver into a serial video signal (See Fig. 2, item 14).

Shimizu does not teach LCD driver comprising a plurality of driver ICs and video transmission line passing through each of the driver ICs in series, wherein driver ICs are cascade connected in series.

Sasaki et al. teaches and a plurality of signal lines, each of the signal lines passing through each of the driver ICs in series, wherein driver ICs are cascade-connected in series using signal lines (See Fig. 3, items 1-3,10, in description See Col. 4, Lines 34-43). It would have been obvious to the one ordinary skill in the art in the time of invention to implement Sasaki et al. approach in Shimizu apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Shimizu and Sasaki et al. do not show how upon the receipt of a control signal from host, generating header information for packet data that are to be output to a LCD driver, for adding header information generated by sequencer to serial video signal, and for outputting resultant serial video signal to LCD driver.

Babcock et al. shows how to synchronize serial stream and control drivers based on a synchronization pattern included in the serial data (See Fig. 1, items 410, 430, in description See Col.1, Lines 48-67 and Col.7, Lines 42-54). It would have been obvious to the one ordinary skill

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in the art in the time of invention to implement Babcock et al. approach in Shimizu, Sasaki et al. apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Shimizu, Sasaki et al. and Babcock et al. do not show each driver IC includes a controller for generating a mask signal to mask video data output from the driver IC.

Taguchi et al. teaches to generate an RGB masking signal to mask video data output from the driver IC (See Figs. 14, 15, items 12, 46, in description See Col. 7, Lines 56-67 and Col. 8, Lines 6-18).

It would have been obvious to the one ordinary skill in the art in the time of invention to implement Shimizu, Sasaki et al. and Babcock et al. controller using Taguchi et al. approach to include a controller for generating a mask signal to mask video data output from each driver IC in order to suppress a disturbance of image on the panel (See Col. 3, Lines 20-21 in Taguchi et al. reference).

As to claim 11, Shimizu teaches about sequencer and output means (See Fig. 2, items 13, 15, 16).

Shimizu, Sasaki et al. and Taguchi et al. do not teach about generation of header information synchronizing drivers, and wherein output means provide header information used for synchronization.

Babcock et al. shows how to synchronize serial stream and control drivers based on a synchronization pattern included in the serial data (See Fig. 1, items 410, 430, in description See Col.1, Lines 48-67 and Col.7, Lines 42-54). It would have been obvious to the one ordinary skill

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in the art in the time of invention to implement Babcock et al. approach in Shimizu, Sasaki et al. apparatus in order to reduce size and increase reliability of the LCD display device.

As to claims 12-13, Shimizu teaches about a video transmission method, for transmitting a video signal to an LCD driver ICs by transmitting a video signal via parallel interface, but transmit ENABLE control signal via serial interface (See Fig.1, item ENABLE1-ENABLE4).

Shimizu does not teach LCD driver comprising a plurality of driver ICs and video transmission line passing through each of the driver ICs in series, wherein driver ICs are cascade connected in series by video transmission line.

Sasaki et al. teaches and a plurality of signal lines, each of the signal lines passing through each of the driver ICs in series, wherein driver ICs are cascade-connected in series using signal lines (See Fig. 3, items 1-3,10, in description See Col. 4, Lines 34-43). It would have been obvious to the one ordinary skill in the art in the time of invention to implement Sasaki et al. approach in Shimizu apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Shimizu and Sasaki et al. do not show transmitting a video signal, including a synchronization pattern during a horizontal blanking period, to driver ICs in series via serial interface in order to synchronize video signal for driver ICs. Babcock et al. shows how to synchronize serial stream and control drivers based on a synchronization pattern included in the serial data (See Fig. 1, items 410, 430, in description See Col.1, Lines 48-67 and Col.7, Lines 42-54). It would have been obvious to the one ordinary skill in the art in the time of invention to

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implement Babcock et al. approach during horizontal blanking period in Shimizu and Sasaki et al. apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Shimizu, Sasaki et al. and Babcock et al. do not show driver IC includes a controller for generating a mask signal to mask video data output from the driver IC.

Taguchi et al. teaches to generate an RGB masking signal to mask video data output from the driver IC (See Figs. 14, 15, items 12, 46, in description See Col. 7, Lines 56-67 and Col. 8, Lines 6-18).

It would have been obvious to the one ordinary skill in the art in the time of invention to implement Shimizu, Sasaki et al. and Babcock et al. controller using Taguchi et al. approach to include a controller for generating a mask signal to mask video data output from each driver IC in order to suppress a disturbance of image on the panel (See Col. 3, Lines 20-21 in Taguchi et al. reference).

As to claim 14, Shimizu teaches about a video transmission method, for transmitting a video signal to an LCD driver ICs that are cascade-connected: transmitting a video signal via parallel interface, but transmit ENABLE control signal via serial interface (See Fig.1, item ENABLE1-ENABLE4).

Shimizu does not teach LCD driver comprising a plurality of driver ICs and video transmission line passing through each of the driver ICs in series and applying to an LCD a voltage based on video signal that received and processed by each driver IC.

Sasaki et al. teaches LCD driver comprising a plurality of driver ICs and video transmission line passing through each of the driver ICs in series and applying to an LCD a voltage based on video signal that received and processed by each driver IC (See Fig. 3, items 1-3,10, in description See Col. 4, Lines 34-43 and Fig. 4, item DATA, in description See Col. 4, Lines 59-62). It would have been obvious to the one ordinary skill in the art in the time of invention to implement Sasaki et al. approach in Shimizu apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Shimizu and Sasaki et al. do not teach about video signal is constituted by bit blocks having a plurality of attributes and wherein driver ICs are controlled by using bit blocks.

Babcock et al. shows how to synchronize serial stream and control drivers based on a synchronization pattern included in the serial data (See Fig. 1, items 410, 430, in description See Col.1, Lines 48-67 and Col.7, Lines 42-54). It would have been obvious to the one ordinary skill in the art in the time of invention to implement Babcock et al. approach for the bits blocks and attributes in Shimizu and Sasaki et al. apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

Shimizu, Sasaki et al. and Babcock et al. do not show driver IC includes a controller for generating a mask signal to mask video data output from the driver IC.

Taguchi et al. teaches to generate an RGB masking signal to mask video data output from the driver IC (See Figs. 14, 15, items 12, 46, in description See Col. 7, Lines 56-67 and Col. 8, Lines 6-18).

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It would have been obvious to the one ordinary skill in the art in the time of invention to implement Shimizu, Sasaki et al. and Babcock et al. controller using Taguchi et al. approach to include a controller for generating a mask signal to mask video data output from each driver IC in order to suppress a disturbance of image on the panel (See Col. 3, Lines 20-21 in Taguchi et al. reference).

As to claim 15, Shimizu, Sasaki et al. Babcock et al. and Taguchi et al. do not teach about wait command. Shimizu teaches to use transmit downstream (see Fig. 1, item Enable control line). It would have been obvious to the one ordinary skill in the art in the time of invention to add a wait command for waiting for driver IC, generated by each of driver IC and transmitted to a downstream Shimizu, Sasaki et al. Babcock et al. and Taguchi et al. apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

As to claim 16, Shimizu, Sasaki et al. Babcock et al. and Taguchi et al. do not teach about LCD driver using a packet, and wherein plurality of driver ICs are controlled by a protocol that employs the header of the packet. It would have been obvious to the one ordinary skill in the art in the time of invention to add a protocol that employs the header of the packet in Shimizu, Sasaki et al. Babcock et al. and Taguchi et al. apparatus in order to provide a liquid crystal display device capable of achieving a larger screen size or higher resolution, without unnecessarily increasing dimensions (See Col. 2, Lines 26-30 in the Sasaki et al. reference).

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9. Applicant's arguments filed on 08-05-03 with respect to claim 1-16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

The Ota (US Patent No. 6, 049,318) reference discloses display control device and display control method with masking signal.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



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***Telephone inquire***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 703-305-5661. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

ls

  
BIPIN SHALWALA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600